AMENDMENTS

Listing of Claims:

The following listing of claims replaces all previous listings or versions thereof:

1. (Currently amended) A method of delivering an agent to a prostate cancer tissue comprising:

a) obtaining a peptide that selectively binds to prostate cancer tissue, wherein the peptide is less than 100 amino acids in length and includes a prostate cancer targeting motif having the amino acid sequence of SEQ ID NO:30;

b) attaching an agent to the peptide or protein to form a complex wherein the agent is selected from the group consisting of gramicidin, magainin, mellitin, defensin, cecropin, (KLAKLAK)2 (SEQ ID NO:1), (KLAKKLA)2 (SEQ ID NO:2), (KAAKKAA)2 (SEQ ID NO:3) and (KLGKKLG)3 (SEQ ID NO:4); and

c) exposing the complex to a population of cells suspected of containing prostate cancer cells.

2. (Withdrawn; currently amended) The method of claim 1 or claim 14, wherein the population of cells is in a human subject.

3. (Currently amended) The method of ~~claim 1~~ claim 14, wherein the population of cells is a thin section of a tissue.

4. – 10. (Canceled)

11. (Currently amended) The method of ~~claim 1~~ claim 14, further comprising detecting prostate cancer cells in said population.

12. (Currently amended) The method of ~~claim 1~~ claim 14, further comprising diagnosing prostate cancer.

13. (Currently amended) The method of ~~claim 1~~ claim 14, further comprising providing a prognosis for an individual with prostate cancer.

14. (Currently amended) A method of delivering an agent to a prostate cancer tissue comprising:

a) obtaining a peptide that selectively binds to prostate cancer tissue, wherein the peptide is less than 100 amino acids in length and includes a prostate cancer targeting motif having the amino acid sequence ~~The method of claim 1, wherein the targeting peptide comprises the sequence~~ of any of SEQ ID NO:5 through SEQ ID NO:29, ~~SEQ ID NO:31 through~~ SEQ ID NO:34, SEQ ID NO:35, or SEQ ID NO:37 ~~or SEQ ID NO:83 through SEQ ID NO:129~~;

b) attaching an agent to the peptide or protein to form a complex; and

c) exposing the complex to a population of cells suspected of containing prostate cancer cells.

15. (Withdrawn; currently amended) The method of claim 14, wherein the targeting peptide has an amino acid sequence selected from SEQ ID NO:34 or SEQ ID NO:37~~, SEQ ID NO:37, SEQ ID NO:83 or SEQ ID NO:84~~.

16. (Currently amended) The method of ~~claim 1~~claim 14, wherein the agent is a therapeutic agent or an imaging agent.

17. (Previously presented) The method of claim 16, wherein the agent is a therapeutic agent, and the therapeutic agent is a drug, a chemotherapeutic agent, a radioisotope, a pro-apoptosis agent, an anti-angiogenic agent, a survival factor, an anti-apoptotic agent, an enzyme, a hormone, a hormone antagonist, a cytokine, a cytotoxic agent, a cytocidal agent, a cytostatic agent, a growth factor, a peptide, a protein, an antibiotic, an antibody, a Fab fragment of an antibody, a hormone antagonist, a nucleic acid, an antigen, a virus, a bacteriophage, a bacterium, a liposome, a microparticle, a magnetic bead, a microdevice, a yeast cell, a mammalian cell, a cell or an expression vector.

18. (Previously presented) The method of claim 17, wherein the pro-aptoptosis agent is selected from the group consisting of gramicidin, magainin, mellitin, defensin, cecropin, (KLAKLAK)2 (SEQ ID NO:1), (KLAKKLA)2 (SEQ ID NO:2), (KAAKKAA)2 (SEQ ID NO:3) and (KLGKKLG)3 (SEQ ID NO:4).

19. (Currently amended) The method of claim 1 or claim 18, wherein the pro-apoptosis agent (KLAKLAK)2 (SEQ ID NO:1).

20. (Withdrawn) The method of claim 17, wherein the agent is an anti-angiogenic agent selected from the group consisting of thrombospondin, angiostatin5, pigment epithelium-derived factor, angiotensin, laminin peptides, fibronectin peptides, plasminogen activator inhibitors, tissue metalloproteinase inhibitors, interferons, interleukin 12, platelet factor 4, IP-10, Gro-B, thrombospondin, 2-methoxyoestradiol, proliferin-related protein, carboxiamidotriazole, CM101, Marimastat, pentosan polysulphate, angiopoietin 2 (Regeneron), interferon-alpha, herbimycin A, PNU145156E, 16K prolactin fragment, Linomide, thalidomide, pentoxifylline, genistein, TNP-470, endostatin, paclitaxel, Docetaxel, polyamines, a proteasome inhibitor, a kinase inhibitor, a signaling peptide, accutin, cidofovir, vincristine, bleomycin, AGM-1470, platelet factor 4 and minocycline.

21. (Withdrawn) The method of claim 17, wherein said cytokine is selected from the group consisting of interleukin 1 (IL-1), IL-2, IL-5, IL-10, IL-11, IL-12, IL-18, interferon-γ (IF-γ), IF-α, IF--β, tumor necrosis factor-α (TNF-γ), or GM-CSF (granulocyte macrophage colony stimulating factor).

22. (Withdrawn; currently amended) The method of claim 1 or claim 17, further comprising:

a) administering the complex to an individual with prostate cancer; and

b) treating the prostate cancer.

23. – 54. (Canceled)

55. (Previously presented) The method of claim 12, further comprising categorizing the prostate cancer as androgen-dependent or androgen-independent.

56. (Previously presented) The method of claim 55, wherein said categorizing is based on the expression of IL-11Rα in the blood vessels of said prostate cancer.

57. (Withdrawn) The method of claim 16, wherein the agent is an imaging agent.

58. (Withdrawn) The method of claim 57, wherein the imaging agent is a radioisotope, a paramagnetic ion, or an enzyme.

59. (Withdrawn) The method of claim 58, wherein the imaging agent is a paramagnetic ion selected from the group consisting of chromium (III), manganese (II), iron (III), iron (II), cobalt (II), nickel (II), copper (II), neodymium (III), samarium (III), ytterbium (III), gadolinium (III), vanadium (II), terbium (III), dysprosium (III), holmium (III) and erbium (III), lanthanum (III), gold (III), lead (II), and bismuth (III).

60. (Withdrawn) The method of claim 58, wherein the imaging agent is a radioisotope selected from the group consisting of astatine^{211}, ^{14}carbon, ^{51}chromium, ^{36}chlorine, ^{57}cobalt, ^{58}cobalt, copper^{67}, ^{152}Eu, gallium^{67}, ^{3}hydrogen, iodine^{123}, iodine^{125}, iodine^{131}, indium^{111}, ^{59}iron, ^{32}phosphorus, rhenium^{186}, rhenium^{188}, ^{75}selenium, ^{35}sulphur, technicium^{99m} and yttrium^{90}.

61. (Withdrawn) The method of claim 58, wherein the imaging agent is an enzyme selected from the group consisting of urease, alkaline phosphatase, hydrogen peroxidase and glucose oxidase.